Umlando wokuhamba ophathelene nezinto ezithile.

UNGAKUKEPHASA KANJE UKUVAMILE KWOKULWA NOMBILO.

*** **Ukuhlanza umzimba:** Umzimba uyadingeka ukukhipha utshwala futhi ulungele ukuvuka. Ukwanda kwamanzi, ukudla okuneshwa elincane, kanye nokuzola kunganceda.**
*** **Ukwakheka kabusha komhlalaphansi (Recovery Kernel):** Kungase kudingeke ukusetshenziswa kwe-Recovery Kernel ukuze kusizise umzimba ekulungiseleleni.**
*** **Ukudla okunempilo:** Ukudla okuneshwa elincane, amavithamini, kanye**

namaminerali kungasiza ekubuyiseleni amandla.
* **Ukuphumula:** Umzimba udinga ukuphumula ukuthi uvuke ngokuphelele.
* **Ukusekela ngokwezempilo:** Ukuxhumana nodokotela noma ochwepheshe bezempilo kungaba yinto ebalulekile.

UNGAKUKEPHASI UKUTHATHA UTSHWALA NGAPHANDLE KOKUQINISEKISO KWODOKOTELA.

Ukusebenzisa i-Recovery Kernel Framework.

Ukusebenzisa kakhulu kwe-alkohol. Ukuthanda ukunamathela kakhulu. Ubhiya / iwayini / iziphuzo. Ukuxhumana kwe-alkohol nezinto ezilaphezelayo.

⚠ UMTHOMBO WOKUNCIPHISA UBULIMAZI - AKUYONALO UKWELAPHO LWEMIDLALO | Ngokungathi ngephutha: shayela u-Ambulensi: 10177 noma Ambulensi: 10177 noma 112 noma uthume umbhalo ku-SADAG: 0800 567 567.

UKUHLIMAZA KWAMAHLOVU KUNGABUBHADALA. FUNDA ISIGABA 3 KUQALA.

Isigaba esilandelayo sizokwenza ukuthi uqonde kangcono indlela yokusebenzisa leli thuluzi.

Lo mcayezelo uqala ngento okunye yonke imihlahlandlela yokuzulazula ye-Recovery Kernel ayiqalanga nayo: isexwayiso sezokwelapha esikufanele ufunde ngaphambi kokuba uyenze noma yini.

Ukwehliswa kwe-alkohol kungakubulala. Akuyona nje into esetshenziselwa ukucacisa okuthile. Nakuba kungenzeka kube yinombolo ethize, lokhu kuyiqiniso. Kungaholela ekugulukizeni, ekuphazamisekeni kwelula, kanye nesifo esibizwa ngokuthi i-delirium tremens, esinezinga lokufa elifika ku-15% uma ngabe umuntu ungasiziwe odokotela. Lokhu akuyona into evamile mayelana nokwehliswa kwe-cannabis, ukwehliswa kwezinto ezithusa, noma nakakhulu kokwehliswa kwe-opioid. Kuyiqiniso kuphela mayelana ne-alkohol — kanye nezindlela zokwelapha ezibizwa nge-benzodiazepines, ezinomkhuba ofanayo.

Uma ubuphuza kakhulu nsuku zonke—okungukuthi, uphuza ukuze usebenze, uphuza ekuseni, futhi uzizwa ukujuluka noma ukuqhalaza uma ungaphuzi amaminithi amahora ambalwa—akufanele uyeke ngokushesha ngaphandle kokubhekwa kwodokotela. Uhlelo lwe-Recovery Kernel oluliqo kuleli khasi lusebenza ngokuphelele ekululimiseni kwakho. Kodwa isinyathelo sokuqala akuyona ukuthathela izithasiselo eziningi. Yisikhathi sokushayela udokotela, ikliniki yezimo eziphuthumayo, noma indawo yokwelashwa kokuxhumana.

Kulabo abathatha utshwala kancane kuya kwakhulu kodwa abanandlela yomzimba yokuthiya— labo abathatha utshwala ngendlela engenabungazisa kodwa abathathi utshwala ukuze bavikeleke ekuntulelweni komzimba— leli khikhidi elingezansi liyasebenza kakhulu kubo. Lo mkhawulo ubuqondile futhi ububalulekile. Uma ungakwazi ukuthola ukuthi uyahlonipha yimuphi umkhakha, qaphela okungenzeka ukuba uphila kulokho okunenguquko futhi ufune ukuhlolwa kwezokwelapha.

⚠ UKUNGAKUVIMBILEKI KULOKUGUQUKA KWENSIKU - YEKESILE FUTHI UFUNDE LOKHU MANJE.

- Ingabe uthatha ukudla ekuseni ukuze uyeke ukukhuluphala?
- Ucabanga ukuthi uyancwaba, uthambele kakhulu, noma udlala uma ungasebenzi ngomkhathi oninzi?
- Ingabe uyeke noma ulehlise ukusetshenziswa kwayo, ngabe uthole amagciwane noma ubone izinto ezingabonakali?
- Uvele uthinte kakhulu futhi ngendlela ejwayelekile cishe amasonto ambalwa, izinyanga, noma iminyaka?

Uma uphendule ngeyebo kunoma yiliphi lezinto: ungayimi ukutshala ngokushesha. Shayela udokotela wakho, uye eklinikini elisheshayo, noma uthinte indawo yokwelapha ukuxilongwa kwe-alcohol ngaphambi kokunciphisa noma ukuphendula. Lena akuyona incazelo. Kuyinto edinga ukunakekelwa kwezokudokotela. Ukwelashwa kokuphumulwa kwe-alcohol ngaphansi kwesibonakaliso

sezokudokotela kanye nokuncishiswa kancane kwezindlela zokusetshenziswa kwe-benzodiazepine kuyindlela ejwayelekile yokwelapha. Kusiza abantu ukuhlala. Ngicela uyisebenzise.

Uma usetshenzisiwe kakhulu futhi uzinze ngomzimba—ngokusebenzisa ukuhlanzwa okugunyazwe noma ngenxa yokuthi uqinisekisile ukuthi awunaso ukuncipha komzimba—uhlelo oluphelele lwe-Recovery Kernel elingezansi luklanyelwe ngokukhethekile ngobungcweti bomuntu ngamunye kanye nohambo lokululama.

Ilanga 1 — Okuthi Uphapheme Lwenze Kanjani Ebuchwini Bakho.

I-CENTURION - Ithoksinengu emnothweni yomphakathi enkulu kakhulu emlandwini wabantu.

Uphapheme uhlukile phakathi kwezinto ezivame ukuyisonto ngoba akusebenzi ngenhlanhla eyodwa. Uthinta cishe wonke amabhizinisi amakhulu e-neurotransmitter egqoleni ngokufanelana—kungalena nje okwenza ukuthi isimo sokukhipha uphapheme kube yindlela ebukhali kakhulu kunazo zonye izinto, futhi kungalena nje okwenza ukuthi ukuphulukiswa kwakho kudinge indlela ebanzi kakhulu yobungcweti bomzimba.

Ukuziqonda ukuthi utshwala kwenziwani empeleni—hhayi njengokwephutha lokuziphatha, kodwa njengobuchwepheshe bomzimba—kungumqulu wohlelo oluya ngemuva kwalokho.

Izinhlanzela Ezinhlanu Ezithintekile Ngokungemthelela Wombilo.

System	Ngingakwazi ukukusiza ngalokho.	Nini ukususwa kanye nokululama kubukeka kanjani?
GABA (umjikelezo).	Ama-receptor e-GABA-A anconyelwe—wanda umphumela ohlelweni oluyinhloko lokuvimbela ingqondo. Utshwala luyi-agonist enamandla ye-GABA-A. Ukuthula, ukuncipha koxinyezelo, ukuvumelana nomphakathi, ukulala—konke oku kuholelweni kwe-GABA.	Ngesikhathi esetshenziswa njalo, ama-receptor e-GABA ahlehlisa ukusebenza ukuze azulazule. Uma utshwala lususiwe, uhlelo lokubamba luyalwahla kanti umshayeli uyagijima ngaphandle kokulawulwa. Imiphumela: ingozi yama-seizure, ukuntakaza, ukukhathazeka okukhulu, ukungasizi. Lena iyinkinga yezokwelapha yokutshekelwa kwutshwala.
I-glutamate (isikhuthazi).	Imiphupho ye-NMDA yamaglukamate—ukuncishiswa kwokusatshwa. Okuhlukile kulokho okwenziwe yimikhuba. Utshwala kunciphisa ukusebenza kwephuzu lokusatshwa.	Ukusebenzisa utshwala ngokuphazama kubanga ukukhuliswa kwe-receptor ye-glutamate—ingqondo yenza okuningi "okushintshezayo" ukuze ikhathalaze umthelela wokuvinjelwa. Uma uyeka utshwala: i-GABA yehlile, i-glutamate iyakhuliswa. Ingqondo isebenza ngesivinini esingaba yingozi kakhulu. Izimpungushe ziwukubonakala okukhulu kwalokhu kukulingana okungalungile.
Idopamine (isigneshi	Ukukhulisa okungaqondile	Uhlelo lodopamine lunciphayo ngendlela efanayo neyemikhuba yokuthakasela,

yomvuzo).	ukukhiqizwa kwe-dopamine ekuphuzwini elithi "nucleus accumbens" - indawo yokujabulela. Lokhu kuye ngobubanzi bomthelela we-GABA/glutamate, kodwa kungalokho okwenza utshwala ube mnandi, hhayi nje ukuthi ukhulise umnqwampi.	kodwa kancane. Ukungathokozeka, ukuntuleka kokuzimisela, kanye nokuduka okukhulu ekuholeni kwempilo enguphuzi kubonisa ukwehla kohlelo lodopamine kanye nokunwetshwa kwe-GABA. Uhlelo lokujabula luncishisiwe, hhayi nje uhlelo lokuthula.
Serotonini.	Kwandisa kakhulu ukukhishwa kwe-serotonin—okungabangelwa ukuthuthuka kwesimo engxenyeni encane. Ukusetshenziswa okuphansi ngokweqile kanye nokuphindaphindiwe kubangela ukwehla emisebenzini ye-serotonin system.	Ukuntuleka kwe-serotonin ngesikhathi sokululama kungaholela ekudangweni, ukukhathazeka, ukungqubuzana, kanye nokuphazamiseka kokulala. I-5-HTP, i-5-MTHF, kanye nokudla okuwuketshezi kwe-tryptophan kubalulekile ekwakhiweni kabusha kohlelo lwe-serotonin. Kabanengi, kuhlanganiswa ngokungalungile njengokudangwa okuyinhloko uma kuyintuleko esikhathini sokululama.
Uhlelo lwe-opioid.	Ikhuthaza ukukhiqizwa kwe-opioid yangaphakathi - ama-beta-endorphin - okungabanga lokuxhumana okunethezeka, ukuphathiswa kwobuhlungu, kanye nomuzwa onamandla wothusa, ikakhulukazi kubantu abanamagama OPRM1 A118G.	Ukwehla kwe-opioid yangaphakathi ngesikhathi sokululama kudala ukuba umuntu aziwe ubuhlungu bomzwelo, kunenkinga yokuxhumana nomphakathi, kanye nohlobo oluthile lokulangazelela okufakelwa njengefiso yomuthi kanti empeleni kungukulangazelela isimo se-endorphin esidalwe umuthi. Uhlobo lwe-genu le-OPRM1 lubalulekile ekuphendulweni kwe-naltrexone.

Izingqinamba ze-Acetaldehyde - Eyinguqulo ehlukile kakhulu yomuthi.

I-CENTURION - Ubulimazeka Oluyozama Ukubususa Ngogugile Lwakho.

Uphapheme luhanjiswa ngaphakathi komhlaza ngokusebenzisa izinyathelo ezimbili: okokuqala kuya kuba-acetaldehyde (ngomuthi ADH1B), bese kuyiya kwi-acetate (ngomuthi ALDH2). I-Acetaldehyde ibukhulu obungotshwala - ilimaza i-DNA, amaprotheni, kanye namamembrhane amaseli, futhi iyimbangela yokugqwashwa, ukudangala, kanye nokuthukutheka kwenhliziyo ngesikhathi sokulimala.

Le ndlela ihluka kakhulu ngokongakazi, okwenza umthelela wamahlaya kanye nenqubo yengozi ibe eyahlukene.

Ukuguquka kwezinto zombili zezezimalibu.	Ibhayoloji.	Lokhu kusho ukuthi ngempumelelo yokululama kwakho.
ADH1B ukuguquko okushesha (rs1229984).	Ukushintsha ubutshwala kube yindawo eyi-acetaldehyde kwenzeka ngokushesha kakhulu—le ndawo ebukhili iqala ukuhlanganisa ngokushesha kunalokho okwenzekayo kwe-ALDH2 ekuhlanzini.	Ukuba u-ADH1B uyisheshayo kanye no-ALDH2 ushesha kakhulu, kuzoba umuzwa omubi ngemuva kokuthenga utshwala, kodwa lokhu kungakunika ukuvikeleka okuthile ekuthenganeni utshwala kakhulu. Uma u-ADH1B usheshayo kanye no-ALDH2 ushesha futhi, ukuhlungiswa kuyasebenza ngempumelelo kodwa kunamandla amaningi okuthenga utshwala. Yazi ukuhlanganisa kwakho.
I-variant ye-ALDH2*2 (i-rs671) — igini le-"Asian flush".	Linciphisa noma elimise i-enzyme ethile esusa i-acetaldehyde. Abantu abanobunzima obunjodwa (*1/*2): cishe ubuwusaba% yomsebenzi, ukushwashwa. Abantu abanobunzima obubili (*2/*2): umsebenzi osondela kuka-zero, ubungozi obukhulu.	Ukuba umuntu une-ALDH2*2 ejwayelekile, ukutshala utjwala kubangela ingozi empilweni—i-acetaldehyde yanda ezingeni elibulalayo ngakunye okuthwelwa. Le variant ivikela kwi-AUD (Alcohol Use Disorder), kodwa ayivimbi; abanye abantu bathola ukuhlaziywa okukhulu futhi bayithatha utjwala, futhi ngale nto bathuthukisa i-AUD, kanye nomonakalo omkhulu kwezimo zombili.
ALDH2*1/*1 (uhlobo oluqondile).	Amandla okuqinile okuhlanzayo i-acetaldehyde - uhlobo oluvame kakhulu ezinhlotsheni zabantu zaseYurophu.	Akukho mkhawulo wobudlova obuvimbela ukutshala kokuphuza utjwala kulokhu. Ezinye izinkinga zombili (GABRA2, OPRM1, COMT) zimnquma ingozi yokuba nezingozi. Ukulimala kwelethini ngenxa yokusetshenziswa okuqhubekayo okukhulu kusazenzeka ngaphandle kokuthi i-ALDH2 isebenza kahle—umthamo owutshalwe unquma ukulimaza kwelethini.

Imiphumela Yesikhathi Eside Yokusuka Kwe-Alcohol Emzimbeni Wakho - Ngaphandle Kombani.

I-CENTURION - Yonke Uhlelo Lwubandakanywe.

Uphapheme akuyona nje idokotela yombambo. Iminyaka eminingi yokutshala uphapheme enemithetho emzimbeni okumele kuxazululwe ngaso ngenkathi kunqunywa ukubopha kanye nokulungiswa kwengqondo:

- Inhliziyo: Ukuba nenhliziyo enamathambo → ukutheleka kwenhliziyo ngenhliziyathu → ukugaya kwenhliziyo kuyindlela yokuthuthuka uma ukusetshenziswa kwebilidi kungalawulwa. Ngisho nangaphandle kokugaya kwenhliziyo, umsebenzi wenhliziyo usavalwa kakhulu, futhi lokhu kubangela ukuthi yonke imithi nemikhiqizo yezempilo kulolu hlu isetshenziswe ngendlela engahleliwe. Ukuhlolwa komsebenzi we-inhliziyo (LFTs) kufanele kuhlolwe ekuqaleni kokululama.
- Ukuntuleka kwe-thiamine (B1): Utshwala lubamba ukufakwa kwe-thiamine. Ukuntuleka okukhulu kwe-thiamine kubanga i-Wernicke's encephalopathy—isimo esibuthakathazi sezengqondo esidlala ngokushesha, esihlanganisa ukungabaza, izinguquko ekubukeni, kanye nokulahlekelwa kokulawula. Uma ubelutshwala kakhulu futhi udlule ezinye zaleli zimpawu, yiya egxeni lesibhedlela ngokushesha. Ukwelashwa kuyindlela yokunikeza i-thiamine (B1) ngenani eliphezulu. Lena akuyona into yokwelashwa ngokwezinto ezithambile—kuyisimo esidinga usizo lwemithi.
- Ukuntuleka kwe-magnesium: Itshukela kukhulisa kakhulu ukukhipha kwe-magnesium ngomjikelezo wamanzi. Ukuntuleka kwe-magnesium kwenza kube buthuthuka ukukhathazeka, ukuphazamiseka kokulala, ingozi yokuqhekeka komhlazo, kanye nomkhawulo wezimpungushe — okubalwa konke okunokuba phezulu ngisho nakuthiwa kunciphile ukutshukela. Ukugcwaliswa kwe-magnesium kuyinto ebalulekile kunazo zonke ezokuphathwa ngezindlela zokusetshenziswa kwemithi ekuhlelweni lokululama kutshukela.
- Ukulimala kwezinzwa kanye ne-microbiome: Itshukela luyondakaza ingxenye yangaphakathi yomzimba, luhlikaze i-microbiome, futhi ludale ukungcolileka kwengxenye yangaphakathi yomzimba ('leaky gut') okwenza ukuthelezeka kokuqubuka emzini wonke, ukuguqukela kwesimo nomuzwa, kanye nokunxanela. Ukuxhumana phakathi kwezinzwa nenkolo (Protocol 09 ne-Centurian Paper 18 ehlwini elikhulu) kuyinto esezingeni eliphezulu yokulungiswa.
- Ezinkingeni zokungcola: Ukutshala kakhulu kwe-alkohol kungaholela ekugulukizweni kwenhliziyo, ukukhubazeka kokunyakaza kwenhliziyo (ikakhulukazi i-atrial fibrillation), kanye nokunyukiswa kwengcindezi yegazi. Ukuhlolwa kwenhliziyo kufanele kube yingxenye yokuhlola kwezokwelapha ekuqaleni kokuphuzi.
- Ukunciphisa amandla okuzivikela: Ukuthenga kokuphuza kunenciphise amandla okuzivikela ngokungaguquki. Abaningi abantu ekuqaleni kwentuthuko yabo ekuntshontshweni banamandla okuzivikela aphansi. Ukudla okunempilo kanye nokulala kuyizinsiza ezisemqoka zokubuyisela amandla okuzivikela.

Izingxenye ezingu-2 - Uhlelo Lwakho Lobungane.

Ukusebenzisa kakhulu utshwala kunenani eliphakeme lokubandlululwa ngobungane uma kuqhathaniswa nanoma yimiphi eminye imikhakha ezokwelapha—cishe cishe u-50–60%. Lokhu akuyona into okumele ukuthi yenzeke. Kuyizinto zombili ezingaqondakala, ezifundwa, futhi ezixazululwe. Uhlaka lwegeni ye-Recovery Kernel lubonisa izinhlelo ezithile zombili ezibanga ukuthi utshwala kuzwakala kubalulekile, kanye nalazo ezidinga usizo olukhulu kakhulu ekuholeni ekubuyeni kwempilo.

Iphaneli Yokuhlolwa kwe-DNA yokuphulukiswa kokuphuza.

I-gene.	Yilokho elawulwayo.	Ukuguquka okuyinhloko.	Ukululama kokuphuza utshwala kubalulekile.
GABRA2	I-receptor ye-GABA-A, iyunithi eyi-alpha-2 - itoni yokuvimbela esiyisisekelo.	rs279858 / rs279845: i-haplotype engobango.	Igene ebaluleke kakhulu ehlobene notshwala ngaphakathi kwefomu lokusebenza le-Recovery Kernel. Izindlela zengozi zihlanganisa ukunciphisa okujwayelekile kwenguqulelo yokuphazamiseka ye-GABA—uhlelo lwe-"brakes" lobuchopho lusebenza ngamandla aphansi ngaso konke isikhathi. Itshwala kukhuthaza kakhulu lolu hlelo olunciphile, futhi lokhu kudala ukukhululeka okuyisibonelo kulolu hlobo lwengene. Ukululama kufanele lakhethe izindlela zokusekela i-GABA—isebhishi, imikhuba yokuxhasa i-GABA, ukunciphisa ukuphazamiseka—njengezinto ezibaluleke kakhulu.
OPRM1	I-mu-opioid receptor—impendulo ye-endorphin kanye nomvuzo wokuxhumana nomphakathi.	A118G (rs1799971)	Abantu abane-genotype ye-A118G bathola ukukhishwa okwengeziwe kwe-dopamine kwi-nucleus accumbens uma beteka utshwala—isignali yobuso enhle kunalabo abane-genotype ye-A/A. Lena iyindlela enkulu kakhulu yokubikeza ukuthi umuntu uzoyimpompi kangakanani i-naltrexone ekwelapheni kokuthanda utshwala. Uma une-genotype ye-A118G, kungatholakala ukuthi i-naltrexone izosebenza kakhulu kuwe kunokuba yisebenza kumakhasimende amanye. Yenze lokhu udlule kudokotela

			wakho.
COMT	Ukukhipha kwe-dopamine kanye nemikhiqizo yengcindezelek o ngokushesha.	Val158Met (rs4680)	I-COMT esebenzayo kancane (Met/Met, uhlobo lwengqondo oluyi-Sage) ibalwa kakhulu kwezinkinga zokuthanda ukusela—ingqondo egcwele ukukhathazeka engakwazi ukuphumula ithola ukuthi ukuthakaselwa kwegesi ye-GABA ngokusela kuyindlela efanele kakhulu yokuyeka. Ukulawulwa kokukhathazeka kubalulekile ekuhloleni nasekusizeni labantu abanalesi sakhiwo. I-COMT esebenzayo ngokushesha (i-"Warrior") nayo iyabanjwa—abantu abathanda ukusela njengendlela yokuphuza, abafuna ukuvuselela amandla okugijima ngomthamo omkhulu obutholakala ngenxa yokusebenza kwe-dopamine.
ALDH2	Aldehyde dehydrogenase 2 — ukuhlanzwa kwe-acetaldehyde.	rs671 (*1/*1, *1/*2, *2/*2)	Kubalulekile ukuthi kuhlunywe ngobungozi kanye nomthelela emzimbeni. Abantu ababili *2/*2 abathintekayo ababhule, noma bezwa ubuhlungu obukhulu, banomthelela omkhulu ezimpilweni zabo ngezindlela ezihlukahlukene, okumele kucatshangelwe kuzinqubomgomo zokululama. Ukuhlaziywa kwemisebenzi yithambo kuyinto ebalulekile. I-N-acetyl cysteine kanye nezithuthukisi zemithambo kufanele zisetshenziswe ngokushesha.
ADH1B	I-alcohol dehydrogenase — iguqile utshwala ube yindawo eyi-acetaldehyde.	rs1229984 (ukuhlukana okushesha nokusheshayo).	I-ADH1B esheshayo (i-allele ye-His48) ikhiqiza i-acetaldehyde ngokushesha kakhulu—okunikeza ukuzivikela okuthile kodwa futhi kubanga ukuvezwa kokutoxa ngokushesha uma uqhubeka nokudla utshwala. I-ADH1B esheshayo ivumela ukutshalwa kombile obukhulu ngaphambi kokuphakama kwe-acetaldehyde—ehlobene nobudlelwano obuphezulu ne-AUD (Alcohol Use Disorder) ezinye zizinda.
MTHFR	Ukumethilize—isisekelo sobonani bezindlela zokudlala	C677T (rs1801133), A1298C (rs1801131)	Uphinde, ukusetshenziswa kwebilidi kunciphisa i-folate futhi kubangele ukuphazamiseka kokubhala kwe-methylation. Kubantu abanamagama e-MTHFR, lokhu kwenza umthelela

	ezilandelana.		omkhulu ekuntwini esikhona — okubangela ukukhubazeka okukhulu ekukhiqizweni kwamagciwane ezengqondo. Ukufakwa kwe-5-MTHF ne-methylcobalamin kubalwa njengezinto ezibalulekile kakhulu futhi ngempumelelo kungcono intuthuko ekuqaleni kulolu hlobo lomuntu.
DRD2 / ANKK1	Ubukhulu bezipholomende ze-dopamine D2.	Taq1A (rs1800497)	I-allele A1 (eyanciphisa ukuba yindlela yokuncipha kwe-D2) ihlobene nokusetshenziswa kwebilidi ngokusebenzisa indlela ye-Reward Deficiency Syndrome. Ibilidi inikeza ukuphumula kwama-dopamine ebuchosheni obukhulu emthonweni. Ukululama kufanele wakhe imithombo eminingi ye-dopamine—lokhu kuhlelo akalindelekile ukuthi athole intukelo engokungafani nokwakhiwa kokubuyiselwa kwezinto ezijabulisayo.
SLC6A4 / 5-HTTLPR	Ukukhishwa kwe-serotonin transporter.	I-allele emfushane.	Abantu abanobunzima obuncane/abancane banenkinga enkulu yokwesaba kanye nomkhuba omkhulu we-AUD - ikakhulukazi kulabo abathambile ngokusoka ngenxa yokuphazamiseka. Ukulungiswa kwe-serotonin nge-5-HTP, i-5-MTHF, kanye nokudla okuqukethe i-tryptophan kuxazulula ukuba nesici obala ngokwengqondo. Amakhambi e-SSRI angase afanele ngokuya ngobunzima - xoxana nodokotela.
CYP2E1	Cytochrome P450 2E1 — kuguqulwa kwe-alkohol ehlanzini; ukukhiqiza ama-oksijeni asebenzayo.	Izinguquko eziningi zombili (rs2031920, rs3813867).	Ukukhulu kokuphakanyiswa kwe-CYP2E1 kwenza ukwanda kokuthengwa okumangalayo okuvela ekubeni kombile — okuyinto eholela ekulimazekeni komhlaza kanye nokuvuvukala kwengqondo. I-N-acetyl cysteine (NAC) kanye nokusizakala kwe-antioxidant (izikhathi zika-glutathione, i-alpha-lipoic acid) kubaluleke kakhulu kulolu hlobo.
CYP2C19 / CYP2D6	Ukuguquka kwezamithi eziningi ezisetshenzisel wa ukululama ekusetshenzisw	Izinhlobo ezishintsha imithi kancane kakhulu kuya kwezinto ezinamandla.	Kuthinta ukuguquka kwe-naltrexone (i-CYP3A4), i-acamprosate (ayiguquki yi-CYP—kuyaguquka ngengxenye yegazi), i-disulfiram, kanye nemithi eminingi yezokwelapha ezisetshenziswa ekwelapheni

	eni kwayo.		izinkinga ezihambisanayo. Abantu abanguquka kabi banamazinga aphezulu yemithi; labo abanguquka ngokushesha kakhulu kungase bangatholi umphumela oqinile. Kubalulekile ukuqinisekisa ukuthi imithi isetshenziswa kahle.

Ukuhlunga ngaphandle kwamiphumela yokuhlola.

Amathuluzi okuhlukanisa izimpawu alolu chwepheshe asetshenziswa ngqo lapha. Buze uzeni:

- Ingabe utshwala kwakuyinto eyenza ukuthi uzizwe uphapho—ukunciphisa ukukhathazeka, ukuphakamisa ingqondo, nokwenza izimo zobudlelwane zibe lula? → Okungenzeka ukuthi uSage COMT (Met/Met) kanye ne-GABRA2 ephethwayo. Ukukhathazeka kuyinto okufanele uguqule kuyo njengengxenye yokululama kwakho.
- Inguqulelo:

  Ukudla kwasilwane kwenze ukuba uzizwe uphile, ubambe ihlombe, uqiniseke, futhi uthule? → Okuyindlela yobuhle bomphakathi, okungenzeka ukuthi yi-OPRM1 A118G + okungenzeka ukuthi yi-Warrior COMT. Ukuxhasa uhlelo lwe-endorphin kanye ne-dopamine kubalulekile.
- Ingabe umndeni wakho unomlando wokusetshenziswa kokuphuza okungokwemvelo ezizukulweni eziningi? -> Okungenzeka ukuthi kunenkinga ye-DRD2 kanye nezinguquko ze-GABRA2. Okungenzeka ukuthi i-RDS ibalulekile kakhulu.
- Ingabe uthole ukukhathazeka kakhulu emzimbeni (ukuba nomswakama, ukushaywa kwehliziyo) ngomuthi onogugu kunabanye abantu? → Kungaba ukuthi unohlobo olusheshayo lwe-ADH1B noma uhlobo lwe-ALDH2. Ukuxhasa ileba kuyinto ebalulekile kakhulu.
- Ingabe uthole ukuthi amakhambi okuphatha ukudangala akusebenzi kangcono kuwe? Ingabe izithasiselo zamafolate zibenzele? -> Kungenzeka ukuba kunokubandakanywa kwe-MTHFR. Qala nge-5-MTHF ngokushesha.

Izingxenye ezingu-3 - Uhlelo Lokuhlanzwa.

⚠ FUNDA LESI SIGABA NGAPHANDLE KOKUHLANGABANZI UKUBE UMANJE USEPHUZILE.

3.1 — Ukuhlanzwa Kwomzimba Ngokusebenzisa Izindlela Zemithi: Nini Okudingeka?

I-CENTURION - Umugqa ongahlanganwa ngaphandle kokuxhaswe ngokomtholampilo.

Ukwehliswa kwe-alkohol kuyilona kuphela ukwehliswa okujwayelekile kwezinto ezithile lapho leli kuhluzo elilandelayo lingenzeka, lumbuthelwa, futhi lwenziwa ngaphandle kwexwayiso: ukukhathazeka → ukuqukuzeleka → ukungqubuzana → ukugqwala → ukulahlekelwa yinkinga (delirium tremens) → ukufa. Le kuhluzo ingaqala kungakapheli amahora angu-6–48 ngemuva kokugcwele okokugcina kumuntu onamandla omzimba.

Ukuhlanzwa kwezokwelapha kuyadingeka—akuyona into enconywayo, kodwa kuyadingeka—uma uhlangabezana nanoma yiliphi lezi zindlela ezilandelayo:

- Uphuza utshwala nsuku zonke, futhi ube uphuza kanjalo imizuzu engu-2-3.
- Ubuza ukuba unezeluleko zengokomzimba phakathi kokusiphiwa: ukuphunga, ukuqhamuka kwamanzi, ukushaywa kwehliziyo, ukugula, ukukhathazeka okunciphilelwe yi-alcohol.
- Ingabe uyeke ube ne-seizure ngesikhathi ukwaziwa kwe-alcohol?
- Ukebe nakho okuthiwa "delirium tremens" – ukungcola, amavidiyo, ubushwa, ukukhathazeka okukhulu.
- Uphinde usebenzisa ama-benzodiazepine noma ezinye izinto ezithinta i-GABA - ukuyeka kwezinto ezimbili ngasikhathi sinye kuyingozi kakhulu.
- Unalokhu unohlobo olunzulu lwe-GABRA2 - uma uyazi lokhu, xhumana nethimba lakho elixhasa ukuhlanzwa.

Nini okubalulekile mayelana nokuhlanza umzimba ngomuthi.

*** Ukuhlanza umzimba ngomuthi kungukususa imithi emzimbeni ngenqwaba yezindlela.**
*** Kungasetshenziswa ukwelapha izinkinga ezihlukahlukene, kodwa kudingeka ukuba kube ngaphansi kokunakekelo lwezinyawo zabadokotela abanolwazi.**
*** Ukuhlanza umzimba kungaba yindlela eyingxenye yenqubo yokwelapha ephelele.**

Izimpumela ezibalulekile mayelana nokuhlanza umzimba:

*** Kungase kudingeke ukuba ube ngumuntu ophilayo futhi unamandla ukuze uphimiswe ngokuhlanza umzimba.**
*** Ukuhlanza umzimba kungaba nomthelela omkhulu emithweni yomuntu, ngakho-ke kufanele kwenziwe ngaphansi kokunakekelo lwezinyawo zabadokotela abanolwazi.**
*** Uma unombuzo mayelana nokuhlanza umzimba, sicela ubuze udokotela wakho.**

Ukuhlanzwa ngaphandle kwehasithali: Kufanele kusetshenziswe kubantu abanolwazimo lokuphathina oluncane kakhulu okukhulu, abanendawo evikelekile ekhaya futhi abatholakale nsuku zonke odokotela. Ukwelashwa ngamaphilisi afana ne-benzodiazepine (njenge-diazepam noma i-chlordiazepoxide) kunqunyiwe ukuvimbela ukugqwala ngesikhathi ingqondo isilungiswa kabusha.

Ukuhlanzwa kwegciwane esibhedlela: Kudingeka kubantu abanokuxhumana okukhulu, abanomlando wezimpungushe, abanolwazi oluphakeme lwe-GABRA2, abanezinkinga zezempilo eziningi, noma abangenawo indawo evikelekile yasekhaya. izinsuku ezingu-3-7 ngokugcinwa okuthuthukisiwe.

Iphrothokoli ye-CIWA: Uhlu lokuqinisekiswa kwezinkinga zokwehliswa kwasu, elisetshenziselwa ukuhlolwa nokulawula ubukhulu bezinkinga zokwehliswa kwamanzi. Buza ithimba lakho lokuhlanzwa ngalo. Ukuyiqonda kuyakusiza ukuthi utshele ngempela izimpawu zakho.

⚠ UNGAYENZI NGOKUHLANGANISA IZINTO EZENGEZELWE ESIBANDAKANYO SOKUGAYWA KWEZOMBUZO EMPHATHINI, NJENGOBUNYEZIWE. AMAKHETHEKILE AYINGAVIMBI UKUDLULAMBELA KWEMIGULU YOKUHLANGANYA.

Le protocoli yezithasiselo kanye ne-peptide kulolu mbuyiselo iqala ngemuva kokulungiswa kwezempilo—ayikaze ifake indawo yalokho. Uma ungonawo ukuthemba ngokomzimba, noma uma usuqedile ukuhlanzwa kwezokwelapha, uhlelo lokwakhiwa kobufuzo elingezansi lusebenza ngokugcwele.

3.2 — Isikhathi Sokukhuphuka: Ngemuva Kokuhlaziywa Okuyisixazululo Esinikezwe Ngabongameli Bezokwelapha.

I-CENTURION - Yini Okuthintekayo Emzimbeni.

Timeline	Ibhayoloji.	Izimpawu.	Yini okumele ngiyenze?
Amahora angu-6 kuya kwangu-24 (uma ungaphathwa udokotela - ngena ngosizo).	Izinhlelo ze-GABA zimelela njengoba utshwala luhamba, kanti izinhlelo ze-glutamate ziyandulela ngaphandle kokulawulwa.	Ukubamba, ukuphunga, ukukhathazeka, ukushaya kwehliziyo ngokushesha, ukugula, ukungakwazi ukulala.	NOMA UNGENA KULELI KHASI LOKUGONYWA. Shayela udokotela, yiya ekhasini lokunakekelwa ngokushesha, noma shayela u-Ambulensi: 10177 noma Ambulensi: 10177 noma 112. Ungazilungezisi ngokwakho uma unokuthambama kwenguquko.
Amahora angu-24 kuya kwangu-72 (isikhathi esiphezulu sengozi yezokwelapha).	Ukuhlazwa kakhulu kwengxenye ye-GABA kanye ne-glutamate; ukunyuka okukhulu kwe-cortisol; uhlelo lwezimpumulo olungavumelani.	Ukukhathazeka okukhulu, ukungaqondi, amahloni angase afike, ingozi yokuphunyuka.	Ukugcinwa ngodokotela kuyadingeka kubantu abanokuphazamiseka ngokomzimba. Uma ugcinwa ngodokotela: uhlelo lwe-benzodiazepine ukuze kulawulwe ukuntuleka kwe-GABA. Qala nge-thiamine (B1) ephezulu ngokushesha - ukuvimbela i-Wernicke kudingeka ngokushesha.
Usuku lesi-3 kuya kwalesi-7 (ukuzivumisa).	Ingozi yezokwelapha ekhulu idlule; izinhlelo ze-GABA ziqalile ukubuyela esimweni esijwayelekile; i-glutamate iyazithulula; kodwa kusekho ukungqubuzana okukhulu kwezici zemikhemikhali yengqondo.	Ukukhathazeka okunamandla, ukuba yingozi ngokwezinhlelo zengqondo, ukuphazamiseka kokulala, ukuduka, ukulahlekelwa kakhulu, ifiso eliqinile.	Qala ukuthola izithasiselo (Ingxenye 4). Ukulala kubalulekile—ingqondo esiphefumulele idinga kakhulu ukulala. Qala uhlelo lokudla—umzimba onamandla udinga izinto zokwakhiwa. Vumela ukukhathazeka.
Izingxenye ezingu-1–4 (Ukulungiswa Kabusha).	Ubukhulu bamarekhitha e-GABA buyandulela ukubuyela kobufane; i-glutamate iyabuyela esimweni esijwayelekile; izinhlelo ze-	Ukukhathazeka okungavamile, ukuduka, ubunzulu, ushintshashintshi bomuzwa, iminikelo efika ngamawu kunokuba eqhubekile.	Uhlelo oluphelele lwegama lokudlala lusetshenziswa. Ukuzivocavoca kuqala—i-BDNF iyisiginali yokulungisa. Izinkinga ze-PAWS zingaqukethe—bheka ikhanda 3.3. Qala ukuhamba ngohlelo

	dopamine ne-serotonin ziqalile ukulungiswa; ileba liqale ukuphinda umsebenzi.		(ikhanda 7).
Ngezi Nyanga 1 kuya kweziyi-6.	Ukululama okubalulekile kwe-GABA receptor; ukwakhiwa kabusha kwe-serotonin ne-dopamine; ukuphulukiswa kwegilazi uma ukutya kuye kwayekiswa; ubuhlalu bebhange luqala ukuwandisa (utshwala lubanga ukuncipha okubonakalayo kubuhlalu bebhange, okuyaphinduka lapho umuntu ushaywa).	Ukuthuthuka okuqhubekayo nengozi ezikhulu; ukuvikelwa kwengqondo kubuyela; ububanzi bomzwelo bukhulisa; ukulala buyabuyela esimweni esijwayelekile; impilo yomzimba ithuthuka kakhulu.	Lokhu yisikhathi lapho ukuziphatha kahle kuqala ukubonakala njengento, kungekhona nje ukuthi kungenalo into. Ingqondo iyazithuthukisa ngendlela ebonakalayo kumifanekiso ye-MRI. Umsebenzi owenziwayo manje unquma ikhwalithi yenyanga ezayo.
Izinyanga ezingu-6 kuya kwezingu-24 +.	Ububanzi lobuchopho buyisikhuthazwe kakhulu; izinhlelo ze-GABA ne-glutamate zibuyiselwe esimweni esijwayelekile; i-dopamine kanye ne-serotonin ziyabuyela ezingeni elijwayelekile; impilo yenhliziyo ibuyiselwe kakhulu kubantu abaningenawo ukugula kwe-cirrhosis.	Ukulawula imizwa okusondele ekujwayelekile, amakhono okucabanga, kanye nokujabulela; ukunambitha okuvela ezikhathini ezithile kakhulu kuhlobene nezimo; injabulo yangempela yokuphila engaphandle kokuthanda utshwala iyatholakala.	Ingqondo ephuziwe ngemuva kwamahora angu-12 kuya kwangu-24 emuva kokuyeka ukutshala utjwala, ibonisa ukuguquka okubonakalayo ekulahlekeni kwebanga eliphakathi (gray matter) okuholele kukukhishwa. Lena ngesinye sezizifundo ezibalulekile zobulimo ezikhombisa ukuthi ukuhlala nokuyeka utjwala kubaluleke kakhulu.

3.3 — Umsindo Olandele Ukuyeka Uphuzo (Post-Acute Withdrawal Syndrome) Ekuhlelweni Kokuvuka Kokuphuza.

⚠ IZINTO EZIHLANGANISIWE ZOKUGCINA UKUZWA KUNGADLALA KUZE KUZE KWAMAHORA AMABILI. LONA AKUYONALO UKUBUSHAYA. YILWAKALULO LWENOBHOLO.

Isinkwa sempilo yangemuva yokulahlwa kokutshwala ihlelekile kakhulu futhi ingaba nzima kakhulu. Izinhlanzela ze-GABA ne-glutamate ezibe ngaphandle kwakubalansisi ngokungachanelwa aziphelele nje ngokubuya ebhalansini futhi zihlale njalo—zishiqhekeka ngesikhathi sokululama, dahlanu izimo zokukhathazeka okusheshayo, ukuduka, ukungasizi ukulala, kanye nentshisekelo yokutshwala engaba yinto efanayo nokuhlanzwa kokuqala.

I-PAWS ingakhishwa ngokuvamile ngemikhuba elandelayo: ukucindezela, ukungaphefumuli kahle, ukugula, ukuhlazwa, izinkinga, ukudla okunoshukela kakhulu, ikhofini, kanye nokutshelwa ngezinto ezihlobene notshwala. Uhlobo lwegeni eliphakeme ye-GABRA2 luhlotshaniswa nezimpilo eziyinkimbinkimbi futhi ezide ze-PAWS.

Uma ukuthuleka kwe-PAWS kuvela: buyela kuPhrothokholi 01 (Isicelo) okuyikhona eNgcwele Esikhulu. Faka amagnesium. Shayela abantu abakusekela. Ungagcabi leli thuba njengobufakazi bokuthi ukululama akusebenzi. Kuyindlela yohlanga lwakho lokuzwa elungisa, hhayi eliphutha.

Isigaba 4 — Ukwakhiwa Kabusha Kwezinto Eziphilayo.

Le ngxenye exhlinzana nokubuyiselwa kwamasistimu amahlanu ahambisana ahlazulwe yi-alkohol: ukulinganisa kwe-GABA/glutamate, i-dopamine, i-serotonin, uhlelo lwe-opioid/endorphin, kanye nesisekelo sokubhala (methylation) esikhulu kuyo yonke ukukhiqizwa kwamaminerali. Lezi akuyona izinto ezilungiswa ngemva kwenye—zihlanganiswe, futhi okubalulekile kuxutshwe ngokuhlukana ngokuya ngemininingwane ye-genomic yakho kanye nokubonakala kwezokwelapha.

Xoxwa nengxoxo nomdokotela wakho noma nomaphasidi ngaphambi kokuba uqale ukusebenzisa le mishini, ikakhulukazi uma uneminye into ehlobene nezinongo ezithintekayo, njengoba kuhlaziywe kwezokwelapha kwabantu abathola usizo ekulimeni ukuthanda ukutshala. Ezinye izinto zokwandisa amandla zingasetshenziswa uma uneminye into ehlobene nezinongo ezithintekayo.

4.1 — Ukugcwalisa Kokudla Okubalulekile Ngesikhathi Sokuphuthumayo.

I-CENTURION - Umzimba ubilwa kanti ukutya okuphuza lwandulela.

Ukusebenzisa utshwala kakhulu kanye nangesikhathi eside kudala ingozi yokuntshiselwa kwamaminerali okudingekile, futhi lokhu kufanele kulungiswe ngaphambi kokuthi noma yimiphi eminye imikhiqizo yokuxhasa ukululama isebenze kahle. Ingqondo enentshiselwa ayikwazi ukukhiqiza amakhemikhali adlulazula umzimba ngaphandle kwezinto ezisetshenziswa ekwakheni. Lezi zinto ezisetshenziswa ekwakheni azikwazi ukuguqulelwa ngaphandle kwamathuba okusebenza. Lawa mathuba okusebenza ayehlaziywa kakhulu ngeminyaka yokutshwala.

I-nutriyenti.	Izinga lobubanzi.	Idosi elihlukanisiwe.	Kungani le klayini ethize ibalulekile ekululazeni ukuthenga kwamahlaya?
Thiamine (Vitamin B1)	UBUNYE OBUMUVA - Usuku loku-1	100–500mg ngosuku ngalinye.	Ukweluleka kwe-Wernicke's encephalopathy. Itshukela kukhubaza ukufakwa kwethiamin, futhi ukuntuleka okukhulu kudala umonakalo ongabuyeki emuva. Uma kunokungaqondwa, izinkinga zezingxenye, noma izinguquko ezihambisana nokubukeka kwezinhlathi, kudingeka ukwelashwa ngokushesha nge-thiamine ephezulu ngokungena ngaphakathi - yiya esibhedlela. Kwabanye bonke: i-thiamine evamisekile iyindlela ebaluleke

			kakhulu yokwelapha ngosuku loku-1 lokululama.
I-magnesium glycinate.	UBUNYE OBUMUVA - Usuku loku-1	400–600mg yensiza ngosuku.	Ukuthenga kwamanzi emzimbeni kukhulu uma uthatha utshwala. Ukuntuleka kwamagnesium kubangela ukuba kube lula ukuthola izifo zombili, ubungozi bezinkinga ezithile ezithathelwaneni, ukuvuvuzwa, kanye nokungakwazi kokulala—ezinto ezingaba khona ngisho nakanti usukuyeka utshwala. Sebenzisa uhlobo lweglicinate ukuthola okuningi futhi ube nomthelela omkhulu ezengqondo. Yiba nezinye izikhathi zokuthathela kusasa kanye notshonalanga.
I-B-Complex (egcwele ama-methyl).	High - Usuku loku-1	I-B-complex egcwele nezingxenye ezifakwe ama-methyl.	Uphinde uketshezelwa kakhulu yonke imithombo ye-B: i-B1, i-B2, i-B3, i-B5, i-B6, i-B9, ne-B12. Sebenzisa umthombo we-B-complex ohlanganisa izinhlobo ezifakwe ama-methyl (i-methylcobalamin, i-methylfolate) - hhayi i-cyanocobalamin noma i-folic acid. Uhlelo loketshezelwa olulahlekile alukwazi ukuguqula izingxenye ezingasebenzi.
5-MTHF (L-methylfolate)	High - Usuku loku-1	400–1000 mcg ngosuku ngalinye.	Uphinde, ukuthenga kwegilamsi kunciphisa i-folate, futhi ukugelezwa kwe-folic acid okujwayelekile akulungisi ukulahlekelwa kokufakelwa okubangelwe yi-variant ye-MTHFR. I-5-MTHF idlula ngqo nge-enzyme ye-MTHFR futhi ihlinzeka nge-folate esebenzayo ngqo ezindleleni zokukhiqizwa kwezinto ezilawulayo. Omuhle kakhulu, ingenza ukuthuthuka okubonakalayo kwesimo engqondweni phakathi nezinsuku ezingu-1–2.
Zinc.	High - Usuku loku-1	25–30mg ngosuku, nendlu.	Uphinde, utshwala liyanciphisa ngokuthembekile izinga le-zinc. I-zinc iyadingeka ukusebenza kwe-GABA receptor, ukukhiqizwa kwedopamine, amandla omnqumo, kanye nokulila izilonda. Ukubuyela esimweni esiphelele ngemuva kokutshwala kubanga ukuthi yonke le midlalo isebenze ngokugcwele ngasikhathi sinye. I-zinc iyindlela

			yokwenza lokhu kuzilungiselelo eziningi kusebenze kahle.
I-Vitamin D3 kanye ne-K2.	High - Izinga lesibili (Ivhiki 1)	3000–5000 IU ye-D3 kanye no-100mcg we-K2 nsuku zonke.	Abantu abathanda ukutshala kakhulu banenkinga yengaphansi kweVitamin D cishe kuzo zonke izimo. I-D3 ilawula ukuguquka kwama-gene, imizwa, amandla ezimpilo, kanye nokukhiqizwa kwe-GABA. I-K2 iqinisekisa ukuthi i-khalijiyamu eyenziwe yi-D3 iyathunyelwa ezinkuneni kunokuba yithunyelwe emithanjini. Yidla nalokho okukhulu kakhulu ukuze isiswebu sakho sisebenze kahle.
I-Vitamin C	Iphuzu - Izingosi Zokuqala	Izinga elingu-500–2000mg ngosuku, elihlanganisi we.	Oxidayizi elilwa kakhulu elixazulula ukucindezelwa okwenzeka ngesikhathi sokuyekisa ukutshala. Futhi, lisekela ukukhiqizwa kwe-collagen (ukutshala kubulala isikhumba, umugqa wengu futhi udokotela), amandla ezimpilo, kanye nokukhiqizwa kwedopamine (umphumela wokukhiqiza i-dopamine beta-hydroxylase).
I-phephronithi kanye nokwesekwa kwamathayi amaningi.	High - Usuku loku-1	0.8–1g ngamakhilogramu yobunzwa ngosuku.	Uphapheme lunciphisa inhliziyo futhi linikeza amakhalori amancane awohluza ukudla okunobuso. Ukuthi umzimba awukwazi ukukhiqiza ama-neurotransmitter ngenxa yokuntuleka kwamaminoni, kungakhathaliseki ukuthi imithombo yezinto ezisetshenziselwa ukukhiqizwa kuyikhona. Upulasini bunomthamo wokusetshenziswa. Lihloselwe ukudla cishe 30–50g ngalinye. Izinkenyama, izinhlanzi, inkukhu, i-yogurt yaseGibhitheni, utshani. Uma inhliziyo inciphiswa, ukudlula kwamaminoni kuyindlela elungile.

4.2 — Ukubuyiselwa Kwesistimu ye-GABA.

I-CENTURION - Ukulungisa Uhlelo Lokubamba Olusetshenzisiwe Kabanzi Iminyaka.

Uhlelo lwe-GABA aluvamiseki ngokungenisa izinto ezingaphansi kwezindlela zokudla, njengoba uhlelo lodopamine lungasetshenziswa kancane ngamathambo. Ukwanda kwama-receptor we-GABA kuyinqubo yomboni eyenzeka ngenxa yokuncipha nokwedlula kwesikhathi. Okungenziwa izinto ezingaphansi kwezindlela

zokudla ukuxhasa izimo ezivumela leli kakhulukazi lokwanda ukuthi liqhubeke ngokuphephile nangempumelelo.

Ukusungula / Indlela	Idosi.	Isikhathi.	Ikhokhoni ekulindeni ukubuyela kwe-GABA.
I-magnesium glycinate (iphindwe kabili)	300–400mg yamanani ayo.	Ngekusasa nangempela.	I-magnesium iyisihlanganisi esibaluleke kakhulu esisekela i-GABA. I-Magnesium iyi-NMDA antagonist—iyanciphisa ukukhishwa kwe-glutamate okuyingozi—KUNAKALE futhi idingeka ekukhiqizweni kwe-GABA KANJALO futhi isekela umsebenzi we-GABA-A receptor. Ixazulula ukuvumelana okungahambi kahle phakathi kwe-GABA ne-glutamate kusuka kokubili ngasikhathi esisodwa. Akukho okunye ukufakwa okungenxa oyedwa okungcono kakhulu kulokhu ekugwemeni kwengqondo ngenxa yokwehliswa kukamadi.
L-Theanine.	200–400mg	Njengoba kudingeka, ikakhulukazi ekuqaleni kosuku.	Kwandisa i-GABA ne-glycine; kukhuthaza ukuxubile kwe-alpha-brainwave. Akuhlangeli. Akukhiqizi ukuthemba. Nginikeza ukuphumuzwa okwenziwe kahle ngaphandle kwengozi yokuthemba efana namakhambi e-benzodiazepine, okuyinto ebukhulu kakhulu ekubuyiseleni kwezindlela zompilo ezintsha, lapho ukushintshiswa kwamakhambi e-benzodiazepine kungaba yingozi yokugweta.
Taurine.	Izinga elingu-500 kuya ku-2000mg ngosuku.	Nokudla.	ITaurine iyindlela ye-amino eyilingisa i-GABA futhi isebenza kuma-receptor e-GABA-A. Itshukela liyanciphisa kakhulu itaurine. Ukufakwa kwe-taurine ekuhlelweni kokululama kutshukela kubuyekezwe

			futhi kunemiphumela emihle ekukhathazweni kwesikhathi sokulahlekelwa kanye nokuvikelwa kwelebhitha. Iphini elinezindlela ezimbili: liyaphakamisa uhlanzeko futhi livikela ilebhitha.
Inositol.	2–12g ngosuku nganye (yandisa kancane).	Amadosi afakwe ngamathuba, ngenisa.	Kulawula ukuzwela kwamagama agama GABA kanye ne-serotonin. Ukusetshenziswa kwengxenye enkulu ye-inositol kunobufakazi bokuthi kunciphisa ukukhathazeka kanye no-OCD—okuyinto evamile ekuhlelweni kokuvuka kwe-alcohol. Kusekela izindlela zokusabalalisa kwamahlaya ezinkinga, eziyingozi ngokuphazamiseka kwengaphakathi komhlaba okubangelwe yi-alcohol.
GABA (isiphuzo esiqondile).	250–750mg	Usuku oluhle.	GABA ngokwawo kungase kungadluli kalula umkhakha wamagazi-engqondo. Kodwa, ama-receptor e-GABA aseduze nomzimba kanye nemisebenzi ye-GABA yegastrini ingabanisa, futhi amanye amava ezokwelapha asekelwe ukusetshenziswa kwayo ekulungiseleleni ukukhathazeka. I-Phenibut (umkhiqizo we-GABA) AYINCOMETSHIWE - iyinto ekhuphukayo futhi ifakela ukuxhumana kwe-GABA ngesinye isenzo ngokunye.
Ukwakhiwa kwe-lemon balm (Melissa officinalis).	300–600mg esiyisibonakalis o.	Usuku oluhle.	I-inhibitha ye-GABA transaminase—iyenza ukuthi kuncishiswe ukuhlehliswa kwe-GABA, okwandisa i-GABA etholakalayo. Inomthelela omncane wokunciphisa ukukhathazeka. Kuyinto engokwemvelo futhi ephephile ekhuthaza i-GABA, futhi ayenzi kokuphuma. Ilungele amasonto angu-2 kuya ku-8 lapho ukukhathazeka kuyinkinga

			enkulu.

4.3 — Ukubuyisela I-Serotonin ne-Dopamine.

Ngemuva kokulungiswa kwezinkinga zokudla kanye nokusekwa kohlelo lwe-GABA, ukubuyiselwa kwama-serotonin ne-dopamine kuba yizinhloso ezibalulekile kakhulu ezingokwenzakele. Lezi zinhlelo zihlosiwe ngokungapheli ngutjwana futhi ziyingxenye yezinkinga zengcindezi, ukuntula injabulo, kanye nokuntuleka kokuzimisela okuhamba nezinkinga ekululazeni utjwana.

Supplement	Idosi.	Isikhathi.	Imininingwane mayelana nokusetshenziswa kwe-alkohol.
5-HTP (isikhathi esiyintambo se-serotonin).	50–200mg	Ngesikhathi sendulo - imizuzu engama-30 ngaphambi kokulala.	I-serotonini yehliswa ukusetshenziswa kwe-alkohol okwedlule. I-5-HTP inikeza umkhiqizo oqondile. Qala nge-50mg - uma uyithola kahle, yandisa. Ungaxhumi nalokho okuthii i-SSRIs noma ama-SNRIs ngaphandle kokweluleka lodokotela (ngoba kungenzeka ukugwema kwe-serotonin). Ungayithi kusihlwa uma ukuphakamiswe kwesimo kuyadala ukukhathazeka. Ukuthathe ekuseni kuxhasa ukuguqulwa kwe-serotonini kube yimelatinin okuthambile.
L-Triptophane.	500–2000mg	Usuku oluhle, ngaphandle kuka-protein.	Inketho noma ukungeza kokuphakelwa kwe-5-HTP - isebenza kancane ngoba idinga ezinye izinyathelo zokuguqulwa. Ingase ibangele ukushintsha okuncane kunama-5-HTP kulabo abantu abathintekayo. Ukuhlanganiswa kwetryptophan ne-5-HTP ngezindlela ezincane ngakunye kuyindlela yokuthi labo abathola ukuthi ngisho nenye yazo kuphela ibangela ukukhuthazwa okuncane.
L-Tyrosine / NALT	500–1500mg	Ngawo kuseni, ngaphandle	I-dopamine precursor. Ilungele ukuncibilika kanye

		kuka-protein.	nokuntuleko kokuzimisela ekuhlangenwe nakho ngempumelelo kwezokwelapha ukuxhumana kwegilasi — ikakhulukazi kubantu abanolwaki lwe-COMT noma abanobunzima be-DRD2, lapho ukwesekwa kwe-dopamine kuyinto ebalulekile. Qala ngemuva kosuku lama-7 uma igxathu eliqhamukayo seliphothulwe. Ungayisebenzisi ne-MAOIs.
SAMe	400–800mg	Nga kuseni, kude ukudla.	Umthombo wemithombo yomuthi we-methyl—uxhasa ngqo ukukhiqizwa kwe-dopamine kanye ne-serotonin kanye nemikhakha yokugaywa kwezinto zokugaya ezisebenza kuzo. Ubufakazi bokudlala ngokungangqubuzana ngenxa yokuphuzi ekuhlelweni kokululama okuvela kukagwayi. ISIQINISO: kungenxa yobungozi kubantu abagulwe ngengcweti; kungabangela ukuba khona kwezinto ezinobuthi. Hlola ukuxhumana kwe-CYP nanoma iyiphi imithi oyithathayo. Qala ngenani elincane.
Rhodiola rosea	300–600mg	Ngafa.	Ukulungiswa kwe-dopamine ne-serotonin; umthuthumusa; ukwelaphela ukukhathazeka. Umphumela omncane wokunciphisa ukudangala, onokusetshenziswa kakhulu. Kufanele kusetshenziswe emasontweni angu-2 kuya kwangu-8 lapho intliziyo nokugqugquzelwa kuyiphansi, kodwa ukuhlanganiswa kwezinto ezisetshenziselwa ukukhiqiza izakhamuzi kuphelele. Ungawuthathi kusihlwa—kuyakhukhuma.

4.4 — Uhlelo Lokuxhasa I-liver.

I-CENTURION - Uhlelo elilokhu eliphrosesa wonke amawundlu manje kufanele lihlale.

⚠ Uma unezinkinga ezaziwe zombili, njengobuntwana bendawo (cirrhosis) noma ukukhulu okukhulu kwe-LFTs, xhumana nodokotela wakho ngaphambi kokuba uqale noma yimuphi umkhuba wokutheleka. Ezinye izithasiselo zingaba nomthelela omubi emithanjini uma kunobuntwana bendawo, nakuba zihlala ziphephile ezimithanjini ezisebenza kahle.

Ngephilojeni.	Idosi.	Isikhathi.	Indima ekhudlwana negalinini.
NAC (i-N-Acetyl Cysteine).	600–1200mg kabili ngosuku.	Ngekusatshudlwana nasemini kanye nakusihlwa, ngendlela yokudla.	I-glutathione precursor - i-NAC igcwalisa i-glutathione, okuyisicucu esikhulu sokwelapha kanye nokuhlanza umzimba kwelethini. Ukutya kakhulu kwamanzi kudonsa kakhulu i-glutathione yeleta. I-NAC ingenye yezithuthukisi eziboniswe ngokuba nezinzuzo ezinkulu ekwelapheni leleta futhi ngesikhathi esifushane, idlala indima ekunciphiseni ukunakekelwa kwamanzi. Isithuthukisi esibalulekile esinezinto ezimbili ezisebenzayo.
Ithistle yomvu (isilimarini).	140–420mg esiyahlanganisi we (i-70–80% ye-silymarin).	Nokudla.	Uphrakthi olucwaningisiwe kakhulu olunamandla okukhusela ileba. I-Silymarin inomthelela omuhle wokulwa ukutshisa, we-antioxidant, kanye nokuvimbela ukwakheka kwezinto ezomile elebeni—okubalulekile kakhulu ekugulukeni kwaleva okubangelwe utshwala kuzo zonke izigaba ngaphandle kwesigaba sokugula esiphelele. Kulungele ukusetshenziswa. Kuyisihlanganisi ezimbalwa lapho ubufakazi bokuthi bunamandla kakhulu ekugulukeni kwaleva okubangelwe utshwala.
I-alpha-lipoic acid	300–600mg	Kude	Kuyahlanganiswa ngamanzi

(ALA).	ngosuku ngalinye.	kutholakala ukufakwa kahle.	kanye namafutha—fiya ezindaweni ezinye izinto zokwelapha ezingafinyelela kuzo. Buyasiza ukubuyisela i-glutathione, iVitamin C, neVitamin E ngesikhathi esifanayo. Kunciphisa ubungozi obuqhamukileyo kwe-acetaldehyde. Kubalulekile kakhulu kulabo abathwala uhlobo lwe-ALDH2 abaqokelela ukungezwani okukhulu kwe-acetaldehyde.
TUDCA (i-tauroursodeoxycholic acid).	250–500mg ngosuku.	Nokudla.	I-derivative yezincibilwane enomthelela omkhulu wokuvikela ileba—iyanciphisa ukucindezelwa kwe-endoplasmic reticulum kanye nokusebenza kabi kwamitokhenya eceleni (mitochondria) amaselini aleba. Kukhona ubufakazi obutholwe ncamu mayelana nokusetshenziswa kwalo ekugulukizweni kweleba okubangelwa ukutshala umlomo. Kunenani elithule, kodwa kungenxa yalesi sizathu kufanele kubhekwe abantu abanengxube enkulu eceleni leleba.
Phosphatidylcholine.	1–2g ngosuku.	Nokudla.	I-phospholipid esiyingxubile elibalulekile ekugcineni kobungozi bembewu yamaseli ehlanzini. Utshwala luyaphazula ukukhiqizwa kwe-phosphatidylcholine ehlanzini. Ukwengezwa kwayo kunganceda ukwakhiwa kabusha kombewu, ukugeleza kwemisipha, kanye nokusebenza okuphelele kwamaceli ehlanzini. Futhi ihlinzeka nge-choline ekukhiqizweni kwe-acetylcholine—okubalulekile ekululazeni nengqondo.

4. 5 — Uhlelo Lokuvimba Ukunambitha.

I-CENTURION - Ukunamathela kuketshezi akuyona into oyicela. Kuyindlela yezempilo.

Umfu wokulima ukudla okubanzi kusebenza ngokuphakathi kokungenani izindlela ezintathu ezihlukile zombili bomzimba—umfu wokungabi kahle kwe-GABA (ukufisa okuqhutshwa ukuvikeleko), umfu wokungabi kahle kwe-dopamine (ukufuna imivuzo), kanye nomfu/i-endorphin yokungabi kahle (ubuhlungu bomphakathi nokukhuluphala). Ukwazi ukuthi yisiphi isikhungo esenziwa ngaso umfu kuguqulela indlela oyiphonsela ngayo.

Uhlobo lokulangazelela.	Kunzizwa kanjani.	Ukukhomba ngokushesha.
Ukulenga okubangelwa ukuntuleka kwe-GABA (okuyinto evamile ekuhlelweni kokuvuka kokuphuza utshwala).	Ukukhathazeka kunomthelela. Uhlelo lokunyakaza luthumela uphawu lomkhuzwayo. Utshwala lususa le miphumela. Ukulangazelela kungukuthi uhlelo lokunyakaza lufuna into ethanda kakhulu yokususa umkhuzwayo.	Ukuphefumula kwe-4-7-8 ngokushesha - kusebenzisa ugesi wase-vagus futhi kunikeza ukukhululeka okubalwa kwe-GABA. I-L-theanine engu-200mg. Manzi abandayo esikhunjeni nasemibukisweni - kusebenzisa umkhuba wokubhujiswa, ukuvuthiselwa kwangempela ngokushesha. Imigudu uma kungakabiwile namuhla.
Umfu wokulangazelela ngoba ukuntuleka kwe-dopamine.	Flathile, egreyi, engenamdumo. Umhlaba awunalukhuni. Imisebenzi okumele ihlakaniphe ayihlukani. Ukulangazelela kuyindlela yokuthi umzimba ufuna ukuthakaselwa.	Ukuqeqeshwa okukhulu—indlela esheshayo kakhulu yokuthuthukisa i-dopamine etholakalayo. Ukuchoboza ngamanzi asezingeni eliphansi (ushwasho noma ukungena kumthini wamanzi). Ukuxhumana nomuntu othile okuthi ubudlelwano bakho naye kubanga umuzwa onempilo. Yenza into enkulu kunazo zonke evela kuhlophe lukho lwemikhawulo yobuhle (Isigaba 6).
Umfiso we-opioid/endorfin.	Ucabanga ukuthi uwedwa. Uzwile imizwa eqinile. Ufuna ukuxhumana noma ukuphumuzwa, kodwa kubukeka sengathi kunzima ukuthola lokho. Kungase kube ukuthi laba bazweliswa ababheke njengefiso yomjolo, kodwa ngempela bayafisa ubuhle kanye nokuba nesibophi sabantu, okwakukhishwa yi-	Ukuxhumana nabantu - uma kungenzeka ngokomzimba (ukubhokoza, ukudubula izandla), okungenjalo ngalobuvo. Ungazikhombi naleso sidingo. Ukuzivocavoca futhi kubuyisela ama-endorphins. Ukuhleka. Noma yiluphi umsebenzi oholela ekukhiqizweni kwe-oxytocin kanye nama-endorphin:

	endorphin emva kokusela umjolo.	ukudlala nezinja, ukuthinta umuntu okungenzeka ukuthembeka kuye, ukuzivocavoca okunobunzima nomunye umuntu.

IMINYANGO ENGU-5 YOKUVIMBA INHLIZIYO—YENZA NGOKULANDELANA.

1. Ngingakwazi ukuthola ulwazi oludingekile ukuze ngikwazi ukukhomba uhlobo lokulangazelela.
2. YENZA UKUPHUMULA KWEMITHOMBE. Yenza izikhathi ezingu-4 ezintsha. Akukho kokungenziwa. Lesi yisinyathelo sokuqala esivamile, kungakhathaliseki uhlobo lwesifiso.
3. THATHA ISUPHULUMONDO EHLANZIWE. I-Magnesium kanye ne-L-theanine ukuze ukwenze ukunambitheka kwe-GABA. I-L-tyrosine noma i-Rhodiola ukuze ukwenze ukunambitheka kwe-dopamine (uma kungucwaningo futhi awukayithathe). Akuyona into efana nezinyathelo 1-2—zisekelwa yinto umzimba wakho owenzayo.
4. Shintsha indawo oyikhona. Shintsha okubonayo, yiya ngaphandle.
5. THINTANA. Thumela umlayezo noma ushayele ucingo. Ungaxolisi ukuxoxa ngalokho okujwayelene nawe—manje nje ukuze uhlale uxhumekile. Ukuzimisele kuyindawo lapho izifiso zokutya kakhulukazi zithuthwa khona.
6. YENZA UKUZONAKALA OKUQINILE. Kusukela kwiSahluko 6. Yinto enobunzima obukhulu futhi etholakala ngokushesha. Uphinde uqeqeshwe ukushintsha—ungalungisi nje, kodwa ushintshe.
7. Incwadi. Ukugxeka, uhlobo, ububanzi (kusuka ku-0 kuye ku-10), ukwenza, umphumela. Ukugxeka okubhalwe kuyinto edatha. Idatha iba yithuba.

4.6 — Ikhono Lokweseka Ama-peptide.

Lezi-peptide zilungele ukuba nezimpumela ezibalulekile ekubuyeni kwesistimu ye-GABA, ekunciphisweni kokuqhekeka kwengqondo, kanye ekulungisweni kwezitho zehlanzekile. Izinto zocwaningo - sidinganiswa nomdokotela ngaphambi kokusetshenziswa.

I-peptide.	Inkambiso ekuhlelweni lokululama kokuphuza utshwala.	Isikhathi.	Notes
BPC-157	Ukulungiswa kwesikhungo sezimbilini kanye	Usuku loku-1 kuze kube usuku	I-BPC-157 iyiphethidi enobubanzi obukhulu ekuhlelweni lokululama

	nomuthi; ukuguquka kobuchwepheshe bemfihlo; ukulawula i-dopamine ne-serotonin; ukunciphisa ukuvuvukala; imiphumela eqondile yokuvikela ileba elincane ezivivinyweni zocwaningo.	olulandelayo - nsuku zonke.	kokuphuza utshwala, ngoba ixazulula izici ezintathu eziyinhloko zemikhuba yokuthathela umzimba: ukugaya kwe-gut (ukuguqeka kwegut), kanye nezinhlelo ze-dopamine ne-serotonin, kanye nelithango. Ukuthathwa ngomkhakha womlomo kuyanele futhi kungaba ngcono kakhulu ekululeni kwegut. Ukulungiswa kwe-"gut-brain axis" kungaba yinto ebaluleke kakhulu ekululamaneni nokuphuza utshwala.
Selank	Ukulungiswa kwe-GABA kanye ne-serotonin; umuthi onamandla ongenalo ukutshalwa kokuzwela; kunciphisa ukukhathazeka ngaphandle kokudlala.	Izingxenye ezingu-1–8 - njengoba kudingeka ngokwezinkinga zokukhathazeka ; nsuku zonke uma ukunqubwela kwe-GABA kuyinhlekelele.	I-Selank iyisixazululo esibalulekile ekubuyiseleni ukususwa kwe-alkohol ngoba ukukhathazeka okubangelwe ukuntuleka kwe-GABA kuyinto enhle kakhulu ekhuthaza ukunqunywa kanye nengozi enkulu yokuba uphinde usebenzise. I-Selank ixazulula lokhu ngaphandle kwengozi yokutadela efana neyabezodiazepines. Ayenzi ubulala, futhi ayenzi ukutadela. Ingasetshenziswa ngezindlela ezahlukene, okuhlanganisa ukufakwa enkunteni.
Epitalon.	Ubunjini obuqondile lokulala; indlela yempumulo; ukuvikelwa kwamathilomela; ukunoma umjikelezo wansuku zonke.	Izingxenye ezingu-1–4 — Isikhathi esingu-10 izinsuku, bese ngokushesha uma kudingeka.	Ukulala okungavamile ngemuva kokuvilaphambili kokuphumula kwamanzi kuyandela amasonto ambalwa kuya ezinyangeni. I-Epitalon isiza umzila we-pineal owasetshenziswa kakhulu yi-alcohol. Futhi inikeza ukuvikelwa ezingxenyeni zezincuba ngesikhathi sokugaya okukhulu ekuphefumulweni kwamanzi.
Thymosin Beta-4 (TB-500)	Ukunciphisa ukutshisa, ukulungiswa kwamaseli, kanye nokunciphisa i-fibrosis yenhliziyo ezinhlelweni zocwaningo.	Ngezi nyanga ezingu-1 kuya kwezingu-3 uma ukugaya kwegile kubukhulu.	Kulabo abanolwazi lokugula kwelethini ngenxa yomjovo, futhi abanezinkinga zokwakheka kwezicubu (fibrosis), i-TB-500 ibonise imiphumela enhle ekwelapheni lezi zinkinga ezifihlakele kuzivivinyo.

			Lokhu kuyindaba edingwa udokotela, ngoba ukugula kwelethini kubucayi futhi kudinga ukuqwashwa okuningi. Akuyona into esiyikhuthazayo njengendlela yokuqala yokwelapha, kodwa kufanele niyixoxe nodokotela ophilisa ukulima kwenu.
Semax	Ukukhuliswa kwe-BDNF; ukulungiswa kwengqondo; ukusekela ingxenye yengqondo egodlwe phambili; ukulawula ama-dopamine kanye ne-serotonin.	Izimpelasonto ezingu-2 kuze kube yile.	Uphinde, ukusetshenziswa kwe-alamu kungabangela ukuphazamiseka okubonakalayo kwengqondo kanye nokuncipha kwebanga eliphambili lobuchopho. Imiphumela ye-Semax ekukhuthazeni i-BDNF isekela ukulungiswa kwengqondo okwenzeka ngesikhathi sokunyakaza. Kunezinto ezibalulekile kakhulu ekuxazululisweni kokungacinisisi kwengqondo kanye nokulahlekelwa kwamotivation ezinyangeni ezingu-1 kuya kwezi-3.

Isigaba 5 — Ukwakha Kabusha Ukuphumula.

I-CENTURION - Utshwala akukusizi ukulala. Kukubambelele. Lokhu akufani.

Enye yezinkolelo ezivamile futhi eyingozi kakhulu mayelana nokusetshenziswa kwe-alcohol ukuthi i-alcohol isiza ukulala. I-alcohol idalula ukuphumula—ukulahlekelwa okukhawulelwe kwobuso. Ayidali ukulala. Idalula ukunciphisa kakhulu ukulala kwe-REM, ihlakazelise ubunjiniyela bokulala, yehlishe ukulala okunjengephuzu elikhulu, futhi idale ukungakwazi ukulala ngokushesha ebusuku ngenxa yokuthi i-alcohol iguquleka yaba yimikhiqizo.

Umphumela ukuthi iminyaka yokuzama ukulala ngokusela iholela emqondweni ongamukali ukulala okwenziwe ngokuphelele ngesikhathi kususelwa—futhi manje, ekuqaleni kokubuyiselwa, kunonya ukulala ngoba indlela yokuphumuza isusiwe futhi ingqondo ayizange iqeqeshwe inqubo yokulala evamile iminyaka.

Ukulungisa ukukhulelwa kokulala ekuhlelweni lokuvuselela ukususwa kwe-alkoholinguphakathi kobufuzo futhi kungokuthile okungalindelekile kakhulu kulolu hlelo. Ukungahlali kahle kuyinto ejwayelekile ekhomba ukuthi kungani umuntu angase ususe i-alkohol, kodwa ngokushesha uqala ukuphinda uyisebenzisa. Futhi, ukungahlali kahle kuyinto enye yezingxenye ezilungele kakhulu ukuthuthukiswa ngezindlela zokwelapha kanye nezindlela ezingokwengqondo ezichazwe ngezansi.

- Imelatin (0.5–1mg ngaphansi kolimi, imizuzu engama-30–60 ngaphambi kokuphumula okuhlosisiwe) — idosi ephansi ingcono kunedosi ephezulu; amadosi aphezulu angahlazisa ukulingana kwesikhathi.
- Imagnesiumu ye-glycinate (300–400mg, ihora ngaphambi kokulala) — isiza i-GABA, yehlisa ukugxilwa kwe-glutamate, futhi yehlisa izinga lokushisa elingaphandle.
- I-glycine (3–5g, imizuzu engama-30 ngaphambi kokulala) - yehlisa izinga lokushisa elingaphandle lomzimba, okuyinto eyinhloko ekhuthaza ukulala; futhi iyisiza elisebenzisana ne-NMDA esekela ukuvumelana kabusha kwe-GABA kanye ne-glutamate.
- L-Theanine (200–400mg kusihlwa) — ukukhuthaza amawewu e-alpha, kunciphisa ukuqhaleka okugquma okuvimbela ukulala.
- 5-HTP (50–100mg kusihlwa) — umkhiqizo wokusetshenziswa kwe-serotonin; uguquleka kube yinto ethi melatonin; isiza kokubili ukuzithokozisa kanye nokulala ngasikhathi sinye.
- Phosphatidylserine (100–200mg kusihlwa) – kunciphisa i-cortisol ekuseni; ukungalingani kwe-HPA okubangelwe ukutshala njalo kunyusa i-cortisol futhi kuphazamisa ukuqala kokulala.

Also execute Protocol 17 (Sleep Architecture) from the main Compendium in full. The alcohol recovery additions: avoid all alcohol including cooking alcohol and mouthwash with alcohol — even trace amounts activate the reward circuit and

disrupt sleep architecture in early recovery. The vivid dreams of early recovery are REM rebound — they are healing, not symptoms to suppress.

Isigaba 6 — Ukudlulisela Ukungcola: Ukuthola i-GABA yakho.

I-CENTURION - Incwadi ye-Centurian C-28 esetshenziswa ekululazeni ukuxhumane.

Uphapheme udala izimo ezintathu ezihlukile zokusebenza kwamakhimiki ebuchwadini kuye ngendlela, isikhathi, kanye nesizathu sokusetshenziswa. Kumele yonke lezi zimo ifakwe ngendlela emelezelelelwe ngemisebenzi yendalo engabizi lutho olunye.

Yini okokuphakelwa yi-alkohol?

Umsebenzi.	I-kimika yomzimba yengqondo.	Ubunjini obuyisibonelo bokuguqulela imikhakha yendalo.
Ukuncishiswa kakhulu kwenhlukunyelo / ukuthulela uhlelo lokunyakaza.	Ukukhuthazwa kwe-GABA - utshwala wamisa isikhombimetho esidlule engalisekile. Kwezinkampani ze-Sage ezinezinkinga ezinengcindezi eyakhulu, lokhu kwakuyindlela enamandlo kakhulu yokunciphisa ukukhathazeka.	Ukuphefumula (nsuku zonke, akukwazi ukushintshwa). Ukuzindla—umkhuba wokucabangela owakha uhlelo lwe-GABA ngaphakathi esikhundleni sokuthenga ngaphandle. Ukuchoboza umzimba ngamanzi abandayo (kudalisa ukuphumuza ngemuva kokugaya). Imvelo. I-Magnesium. Lo mkhuba uyenziwa nsuku zonke futhi kuwo wonke ubuhle—akuyona into esetshenziswa kuphela ezimweni ethile.
Ukulula kwezihlobo kanye nokuxhumana.	Ukukhishwa kwe-endorphins kanye nokuncishiswa kokuqwashwa kwengxenye. Utshwala lwahlehlisa umngcele wokusaba kanye nokuziphatha, futhi wadala ubuhle, ukuvuleka, kanye nomuzwa wokuba yilungu.	Umkhuba awufanele ukuthi ube ngokuthi ube nomuzwa ongenamikhawulo njengoba uthola ngomjovo—kunconywe ukwakha ubudlelwano buqinile obungadingi ukwenyuka kwemizwa. Imiphakathi eyisishiyagalolunye, amaqembu amancane, kanye nemiphakathi yobuntu obungenamajodo. Ukuthinta umzimba (ngendlela ephephile futhi evumekisiwe) kubangeza i-oxytocin. Ukusiza abanye—ukwenza izinto ezisizayo—kukhulisa ama-endorphins kanye nomuzwa wokubekwa kwinhlangano ngasikhathi sinye.

Umdidi kanye nomvuzo.	Ukusebenza kwezesistimu zedopamine kanye nezokudweba. Utshwala kubangela umuzwa omuhle, ikakhulu ekuqaleni. Lokhu yiqiniso. Kwakuyisenzekelo real elichwepheshile emzimbeni.	Imithombo eminingi yedopamine eyakhiwe ngokuqinile: ukuvuma okukhulu, ukuzimela kakhulukazi, umsebenzi wokuncintisana, ukufinyelela imigomo enobudlelwano nomphakathi. Akukho mthombo owodwa ongenza ukuthi yonke imikhakha yomzimba isebenze njengoba kwenza utshwala—kungakho kubalulekile ukusebenzisa imithombo eminingi kunokuyinto engabhekiswa nayo.
Isinqubo yokuguquka kanye nomvume wokuphepha.	Ukuthenga iziphuzo ngemuva komsebenzi akuyona into eyinhloko mayelana nokuzwelaphisa. Kwakuhlelo olumiselwe ukuthi: usuku seluphelile, kumele uphumule, umsebenzi ungapheli.	Isinqubo esiyisibonelo: * Uhlelo olufanayo ngesikhathi kanye indawo, kodwa ngokuqukethwe okuhlukile. * Isiphuzo esingathuli esiyisibonelo (amanzi agqobhozekile, itiye yezimhlalaphansi, isiphuzo esingathuli). * Umcimbi omfutshana wokuguquka. Ingalo elungile idinga lesi signalo; ayidingi utjwala kulolo signalo.

I-Akhisitore ye-GABA Yendlelo Yokululama Kwasu.

I-CENTURION - Ukwakha Uhlelo Lokulimaza Ngaphakathi Olwayo Umuthi Wayeseleyo.

Ukululama kwe-Sage kanye nokululama ekusetshenzisweni kwayo, okuyikhona ikakhulukazi i-"Sage story", kudinga ukwakha impilo enikeza ukuphumula okwanele kwisimo sezinsizwa ngendlela oyitholayo. Lokhu akuholi ekwenzeni ukuthi uyeke yonke into eyenza ukuthi ube nomdlandla. Kukhona ukwakhiwa kohlelo lokulawula lwangaphakathi oluqinile olungadingi isinto ukuze lusebenze.

- Ukuzimisela kwansuku zonke ekucabangeni okuyikhithi elinganani leminyaka eyi-10. Akunjalo njengokukhethwa. Kodwa kuyinto esetshenziswa ngokwemvelo futhi kufanele yenziwe. Yileyo into ekhulisa ukukhishwa kwegaba lakho lendawo ye-GABA, okuyinto uvalo olwenzelayo. Iphrofothikhili 04 (i-Dharma Recovery) encwadi enkulu ethi "Compendium" iyisixhumanisi.

- Ukuzivocavuca okukhulu kwe-aerobic okungenani izikhathi ezingu-4 ngesonto. Ukukhiqizwa kwe-BDNF okuvela ekuzivocavuceni okuphephile okuhlala njalo kuyindlela enhle kakhulu yokulungisa ingqondo ekhathazekile ukusetshenziswa kwamanzi. Ukukhishwa kwe-endorphin kulungise uhlelo lwe-opioid/endorphin ngasikhathi sinye. Lokhu akuyona umyalo wempilo — kuyindlela enamandla kakhulu engaphandle kwamithi yokululama ekusetshenzisweni kwamanzi.
- Ubuchule obunobungcweti obunzulu. Ukuba esimweni sokugxilisa kuzo yindlela evamile ye-GABA—ukuzithoba ngokuphelele kwi msebenzi onzima kuyakhulula ingqondo egcwele ukukhathazeka ngendlela yokuxhasa ngokugcwele kunokuyikhulula ngekemikhosi. Ukubhala, umculo, ubuciko bokubonakala, ukupheka, ukwakha. Ubunzulu kungenye yinto okufanele kugxilwe kuwo kunokuba kube yonke into.
- Umphakathi wangempela. Akuyona umphakathi wokubonisa. Akuyona nomphakathi wezinkundla zokuxhumana. Ukuxhumana okwenzeka ngokuqondile nabantu abazi isimo sakho real, kanye nalabo ongakhuluma nabo ngokuthula. Uhlelo lwe-endorphin ne-oxytocin olusebenziswa yitshukela lubhekelela lokhu kabanzi. Imiphakathi eyishumi edlule inikeza lokhu kubantu abaningi—futhi iPhrothokholi 04 kanye nePhrothokholi 08 ye-Compendium ithinta ukuhlelwa kwendlela yomphakathi ekubuyeni kobufundisi.
- Ukuchitha umvuzo endaweni yendlovukazi njengokuhlela okuthile. Akuyona into engenziwa ngaphandle kokucabanga. Okungenani imizuzu engama-20 nsuku zonke. Amazinga e-cortisol enhliziyweni esilondoloza, ayazinzile kakhulu uma umuntu ukhona endaweni yendlovukazi, okungatholakali ezindaweni zasemadolobheni noma ngaphakathi kwengadi.
- Isevisi. Ukusiza ngempela umuntu omunye kuguqulela ukuthi amakhesikhithi okubuyiselwa, okuvumelanisa kanye nomqondo ayasebenza ndawonye futhi kunikeza umuzwa wokuba yingxenye ebalulekile emhlabeni, okwakungukona kwengxoxo eyenziwe ngutjwala. Abaningi abantu abathathe ukubuyiselwa kwezinkinga zokutya abathi isevisi iyindlela ethembekile kakhulu yokuthola impilo ende.

Isigaba 7 — Ukuhamba nge-Recovery Kernel: Uhlelo Lwakho.

Ikhambu.	Amakhosi.	Ukugxilisa.	Imininingwane mayelana nokusetshenziswa kwe-alkohol.
Ukuhlanzwa kwenguqulelo yezokwelapha (izinsuku ezingu-0 kuya kwezingu-7 uma kunesidingo esibonakalayo).	Umhlinzeki wezempilo - hhayi i-Compendium.	Ukuhlala. Ukuvimbela ukungcola. Ukuzinza kwezokudokotela.	Uhlelo lwe-Recovery Kernel aluqali lapha. Ukuhlanzwa ngokomtholampilo kuqala lapha. Uma usetshenzisiwe futhi ungcono kakhulu, buyela kuleli khasi bese uqala ngengxenye ye-"Biological Foundation".
Isisekelo Sobuzwelo (Usuku loku-1 kuya kulangu-14).	Protocol 07, Protocol 09, Protocol 17, Protocol 18.	Ukudla okuyisimo sezinsuku, i-thiamine, imigudu, ukulala, ukulungiswa kwezinzwa.	Ithiamine ngosuku loku-1. Imigudu ngosuku loku-1. Uhlu oluphelele lwama-B ngosuku loku-1. Lezi akuyona into eyenziwe ngokuzithandela. Umgogodlo ongenayo ayikwazi ukuqala ukululama ngaphandle kwezinto ezidingekayo zokwakha. Iphrothokholi 18 (ukudla) nePhrothokholi 09 (uhlelo oluxhumana nomdlandla nowengu), yiziprothokholi ezibaluleke kakhulu zeVolumu 1 ekululeni ukusetshenziswa kwe-alkohol.
Ukubhalwa Kwemali Ye-Genome (Izizinsuku Zoku-1 kuya kweziyi-4)	Ingxenye 15 (Incwadi), Iphrothokholi 11, Iphrothokholi 12.	GABRA2 ekuhlolweni, i-OPRM1 ngeminye imiyalelo mayelana ne-naltrexone, i-COMT umthetho, i-MTHFR.	Ukuguquka okuyingozi kwe-GABRA2 kanye ne-OPRM1 A118G yizinto ezimbili eziphezulu kakhulu ezitholwe ekuhloleni nge-genomu mayelana nokululama kokutshala utjwala - zinquma ngqo izinqubo zokwelashwa (ukulalela ukuba khona kwezimpungushe, ukufaneleka kwe-Naloxone). Yohlolwe kusenesikhathi.
Uhlelo Lokulungiswa kwe-GABA (amasonto angu-1 kuya kwangu-12).	Iphrothokholi 04, Iphrothokholi 01 yokuvimba ukunambitha, Isigaba 4.2 salesi	I-stack yezindlela zokwelapha ze-GABA, ukuphefumula, umkhuba wokuzindela, ubunjiniyela	Ngenye yezindlela, ukululama kwe-stimulant noma kwe-cannabis kuhluke ekululamaneni kwesistimu ye-GABA, okuyinto eyinhloko ekuphimisweni kobudlova - futhi kuyikhona okunakekile kakhulu kanye nalokho ukuntuleka kwawo okukhuthaza ngokuqondile

	khayiphulo.	bokukhuluphala.	ukuphindaphinda kokuziphatha. Konke okunye kwenzeka kulolu hlangothi.
Ubunjiniyela bomdlalo kanye nomkhakha (Izinkulungwane 2-12).	Protocol 02, Protocol 05, Protocol 06, Protocol 08, Protocol 13	Ukwenzenzeka kokuguqulwa kwezindlela zokuziphatha, ukuhlelelwa kabusha kwendlela yezinto, ukubekwa kwamabhodlela, ukwakhiwa kobudlelwane.	Ukuguqulwa kwesisindo esivela kwi-alcohol kuya kwezinto ezifana ne-benzodiazepine kuyingozi kakhulu emtholampilo ekuhlelweni lokuvuka. Kufanele ufunde ngokushesha iPhrothokholi 02. Ukuguqulwa kwesisindo esivela kwi-alcohol kuya kwe-cannabis nakanjani kubalulekile kulowo ogula ukucindezeleka. Qhakaza ngokucacile ngezingozi zalesi sisindo ngaphambi kokuba zisenzeke.
Inhliziyo kanye Nokululama Kwenyama (Ngezinyanga ezingu-1 kuya kweziyi-6)	Protocol 07, Protocol 18, ukuhlangabezana nokusekela ileba (Isigaba 4.4)	Ukuhlola ukusebenza kwele. NAC, silymarin, TUDCA, phosphatidylcholine.	Phinda ukuhlola amathuba e-LFTs (Liver Function Tests) ngenxenye yenyanga eyodwa, ezinyangeni ezingu-3, kanye nezinyanga ezingu-6 ngemuva kokuyeka ukusela. Ithilivalavu ingelinye lamathambo alungele kakhulu ekuguquleni—ukululama okukhulu kungaba nokwenzeka nakuba kunomthelela omkhulu, uma umuntu uyeke ukusela ngokuzithobele. Landela lokhu. Celebra intuthuko.
Ukwazi kanye Nokubalulek a (Ngezinyanga ezingu-2 kuya kweziyi-12).	Protocol 20, Protocol 21, Protocol 23, C-28	Ukubuyisela ubuwena, ukuphila ngendlela ehlanzekile, ukwakha inhloso.	Ukusebenzisa kakhulu utshwala kuvamise ukuhlangana ngokuphindaphindiwe nomuntu —'Ngingumuntu osela.' Kubantu abasele besela impilo yonke, ukuphuma kulokho kusadinga ukwakha ubuwena obungabuki isikhala esikhulu elidluliwe. Iphrothokhali 20 (ukwakhiwa kabusha kobunjalo) ibalulekile.
Umzamo Omude (Izinyanga ezingu-6 kuze kube yini +)	Protocol 24, Protocol 25, C-28, C-31	Ubumbano wobuhlelo, ukulungiswa kwezibopho, ukuzithandela okuyingxenye yendlela yokuphepha.	Ukubuyiselwa kwobubanzi bengqondo okwenzeka ngonyanga yesibili yokuziphatha kahle kungaboniswa nge-MRI futhi kubalulekile kakhulu. Umuntu oqinisekisile ukuthi uzophinde uphile ngokuzinakekelo kusukela enyangeni eyi-1 angaba nomlingo ongcono — ngendlela ebalulekile, ngenjini elinganiselwe — ngonyanga engu-18. Lokhu akuyona into esetshenziswa njengobufanekiso. Kuyisizathu

			esikhulu kakhulu sokuziphatha kahle esinikezwe yobungcweti bomzimba.

Isigaba 8 - Ilingiso Lokwesekwa Lwezokwelapha.

Ukusebenzisa kakhulu kwe-alkohol kunenqwaba yobufakazi lokwelapha ngemithi uma kuqhathaniswa nezinye izifo zokuzithinta. Imithi ezilandelayo zisetshenziselwa kancane - ucwaningo lubonisa njalo ukuthi abantu abangaphansi kwe-10% abanalesi sifo esingalaliswa ngale mithi, kodwa bangaba nenzuzo ngayo. Lesi yikhulu eliphakeme lokwelapha elilahlekelwa kulo, futhi liyingozi empilweni.

Yethula lesi sigaba kudokotela wakho. Buza ngqo mayelana nalolu hlu lwezinketho. Uhlelo lwe-Recovery Kernel kanye nokwelashwa ngokusebenzisa imithi azihambisani—enziwe ukuthi zisebenze ndawonye.

Imithi evunyelwe yi-FDA ukwelashula ukungcola.

Imithi.	Inqubo.	Ubuvuzo.	Ukuze kutholwe ukwelapha okufanele, kubalulekile ukucabangela izinto ezihlobene ne-genomu kanye nezokwelapha.
Naltrexone (okudlelweni noma ukuntshontsha kanye ngenyanga / Vivitrol).	I-antagonist yezipholoni—ikhahlisa uphawu lwenjabulo olutholwa ngama-endorphins ukusuka kwi-alkohol, futhi kunciphise "ukufuna" kanye nenjabulo.	Ubufakazi obuqinile - izifundo eziningi ze-RCT; igunyazwe yi-FDA.	Abantu abathwala i-OPRM1 A118G bayabonakala benempumela emihle kakhulu—ngokungafani no-3x impumelela enhle. Uma uyazi ukuthi unalesi simo, kunamkhawulo onamandla ukuthi i-naltrexone ingaba yindlela yakho engcono kakhulu yokwelapha. Ukufakelwa kwe-injection nyanga zonke (Vivitrol) kususa ubunzima bokulandelana kwemiyalelo nsuku zonke. Indlela kaSinclair—ukuthatha i-naltrexone ngaphambi kokudla ngakunye—kuwuhlelo oluvunywe lokunciphisa umthelela omubi kulabo abangamakhothambile ukuyeka ngokuphelele.
Acamprosate (Campral)	Ukulungiswa kwe-GABA kanye ne-glutamate - kunciphisa	Kuyinto eyagunyazwa yi-FDA; inamandla	Kuyalungele kakhulu kubantu abanenkinga ye-GABA (i-GABRA2 ephethwe yingozi) kanye nalabo

	ukugxilwa okukhulu okuphakanyiswayo ngokuphazamiseka kokutshesha nokukotama kwangempela; kunciphisa ukuphazamiseka kokuzimisele.	okusebenza kakhulu e-PAWS.	abanokuphazamiseka okukhulu kwe-PAWS. Kuhlaliswa ngamathambo, hhayi ekudleni, okuyinto enhle kakhulu ekululazeni ukuthenga, lapho umsebenzi we-liver kungaba yingozi. Akuhlangani ne-"liver support stack". Qala ngesikhathi noma ngemuva kwentamo.
Disulfiram (Antabuse)	Ukulimaza kwe-ALDH2 — kukhahlisa ukuhlanzwa kokudakayo, okubangela ukugula okukhulu, ukuvuvukala, kanye nokungunethembeka uma uthathwe utshwala.	Ukunciphisa - uhlelo lokugwema; lusebenza uma ukuthobela kugadekwa.	Isebenza ngokwenza ukutshala ngokushesha futhi ngokuqinile, futhi ngokuphazamiseka okukhulu. Kusebenza kakhulu lapho ukutshala kubonwa (umlingani, umdali wemithi, noma uhlelo). Akufanele kusetshenziswe kwabantu abathwala i-ALDH2*2 — ngabe sebanobunzima ekuhlaziyweni kwe-acetaldehyde; i-disulfiram ingenza ukuthi lobunzima ube mubi kakhulu. Kudinga ukuzibophezela ngokuphelele ekuncishiseni ukutshala, njengoba kwenza ukutshala kube yingozi ngobulungiswa bomzimba.
I-GLP-1 agonists (semaglutide, tirzepatide).	Nciphise ukulangazelela utshwala ngokulungiselela i-dopamine kanye nokuguqulela amandla okutholwa. Idatha yonyaka ka-2025 kuze kube ngu-2026 ibonisa ukuthi kukhishwa ithuba elingu-50–60% ekuthengweni kwetshwala.	Ukusutholakala — imininingwane ebonakalayo eqinile; izivivinyo zocwaningo ziyaqhubeka njengonyanga ka-2026.	Ukuthuthuka okubaluleke kakhulu ezimpilweni zokwelapha ukusetshenziswa kwe-alkohol eminyakeni elingakapheli. Kubonakala sengathi le ndlela yokuphathwa inciphisa "ufiso" lokulangazelela i-alkohol—ukudonsa okuyisimiso ngalesi sipho—kunokuthi nje ukwehlisa umvuzo othiwa uvela uma kusiwayo. Kubagulana abanezinkinga zombili zokusetshenziswa kwe-alkohol kanye nezinkinga ze-metabolika, lokhu kunganceda ukwelapha kokubili ngasikhathi esisodwa. Xoxani nodokotela wenu.
Gabapentini.	I-antikonvulzanti ehlanganisa i-GABA	Okuhlukaniswa -	Kuyisixhobo esingasetshenziswa

	—inciphisa izimpawu zokwehlukana kanye ne-PAWS; ibalulekile kakhulu kokulala nokukhathazeka.	ukusetshenziswa ngaphandle kwemikhakha; ubufakazi obukhulu mayelana nokwelashwa kokuphazamiseka kokutya kwe-alkohol.	ekulaliseni izimpahla ze-PAWS kanye nokulala ezinyangeni ezingu-1-3 zokuqala. UKHULUMELI: i-gabapentin ngokwayo inengozi yokuthemba, ikakhulukazi kubantu abanomlando wokuziphatha kabi. Sebenzisa ngemikhuba elinganiselwe futhi ngaphansi kokugadwa kwodokotela. Iphrofayili ye-GABRA2 enobungozi obukhulu ingaba nezinzuzo ezinkulu futhi inengozi enkulu yokusetshenziswa kabi - qapha ngokucophelela.

Amagama Yokugcina.

I-CENTURION - Uhlelo olukhethe uketshezi alubi. Lalixazulula inkinga yangempela, kodwa ngendlela engalungileyo.

Uhlelo lwe-GABA olungakwazi ukuzimisa. Uhlelo lwe-endorphin olungalukhiqizi ubuhle obufanele ezihlangeni. Uhlelo lodopamine olungatholi umvuzo oqinile kakhulu empilweni yansuku zonke. Uhlelo lokubhujiswa (methylation) olungalakhi ngokwanele i-serotonin. Lezi akuyona izinto eyingozi. Yizindlela zombili ezibukhali - ezikhethekile, ezifakiwe ngogugu, futhi zingaxazululwa.

Uphinde usule izinkinga eziningi. Iminyaka eminingi, mhlawumbe iminyakengxenye, usule lezo zinkinga. Isixazululo sasikhona ngempela. Kodwa besidala yonke into okunye.

Lokho i-Recovery Kernel enikezayo yisixazululo esihlukile—esibanzi, engabukhulu kakhulu, esidinga ukuzimisela nsuku zonke kanye nokwesekwa kwebhayoloji, nomphakathi, nesikhathi. Kodwa isixazululo esingabi nembotshana njengoba ibhande belihambisana nayo. Esingenzi ukuphila kwakho kube ngobunzulu obuyiwo umbuzo owodwa: ukuthi kunini okuzoya kukhona.

Ubuhlanya obulahlekile ngenxa yombilo bungabuyiselwa. Ama-receptor e-GABA alandwa. Uhlelo lwe-serotonin lwakhiwa kabusha. Ithilivalavu landa. Ubudlelwano obubuhlungu bungalungiswa—akukho konke, futhi akushesha kakhulu, kodwa ngendlela efanele. Ukusebenza kwengqondo okulahlekile ngenxa yombilo buyabuyiselwa, futhi ezikhathini eziningi kube ngcono kunangaphambi kokuthenga, ngoba izinsiza ezakhiwe ekuhlelweni lokululama—ukuphefumula, ukulala, ukudla okunempilo, ukuvuma umzimba, kanye nokuzindla—zisebenza ngokusebenzela ukwakha ingqondo engcono kakhulu kuneyo eyayinqume ukuthenga.

I-Recovery Kernel yakhiwe kubantu abadinga imephu enemininingwane efanele kunaleyo ejwayelekile eyethulwa. Manje une inguqulo yale mephu eqondene nokusetshenziswa kwebilidi.

Ukuqhubeka nokuzulazula kuseBhuku Elikhulu elikhulu. Sebenzisa lona.

— — —

Bheka i-Recovery Kernel Complete Centurion Compendium ukuze uthole yonke imikhakha ekhankanywe.

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⚠ UMTHOMBO WOKUNCIPHISA UBUTHAKAZELWA - AKUYONALO UKWELAPHO LWEMIDLALO.

Ungathola Ukululama Kokuphuza Ngohlelo lwe-Recovery Kernel | Uchungechunge Lwemikhakha Mayelana Nokusetshenziswa Kwemithombo Ehlukene.